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Technical Specifications

Device types, use

64-04 **Chess 4**	Label printing using thermal direct or thermal transfer printing process, print width up to 106.6 mm (4 inch)
64-04 Dispenser **Chess 4 Dispenser**	Label printing using thermal direct or thermal transfer printing process, print width up to 93.6 mm (4 inch). A dispensing edge takes the label off the backing paper; an integrated rewinder winds up the backing paper.
64-05 **Chess 5**	Label printing using thermal or thermal transfer printing process, print width up to 127.9 mm (5 inch)
64-05 Dispenser **Chess 5 Dispenser**	Label printing using thermal direct or thermal transfer printing process, print width up to 127.9 mm (5 inch). A dispensing edge takes the label off the backing paper; an integrated rewinder winds up the backing paper.
64-06 **Chess 6**	Label printing using thermal direct or thermal transfer printing process, print width up to 159.9 mm (6 inch)
64-06 Dispenser **Chess 6 Dispenser**	Label printing using thermal direct or thermal transfer printing process, print width up to 159.9 mm (6 inch). A dispensing edge takes the label off the backing paper; an integrated rewinder winds up the backing paper.
64-08 **Chess 8**	Label printing using thermal direct or thermal transfer printing process, print width up to 213.2 mm (8 inch)
64-08 Dispenser **Chess 8 Dispenser**	Label printing using thermal direct or thermal transfer printing process, print width up to 213.2 mm (8 inch). A dispensing edge takes the label off the backing paper; an integrated rewinder winds up the backing paper.
TT4	Label printing using thermal direct or thermal transfer printing process, automated document material feed from 4 material sources.

Dimensions

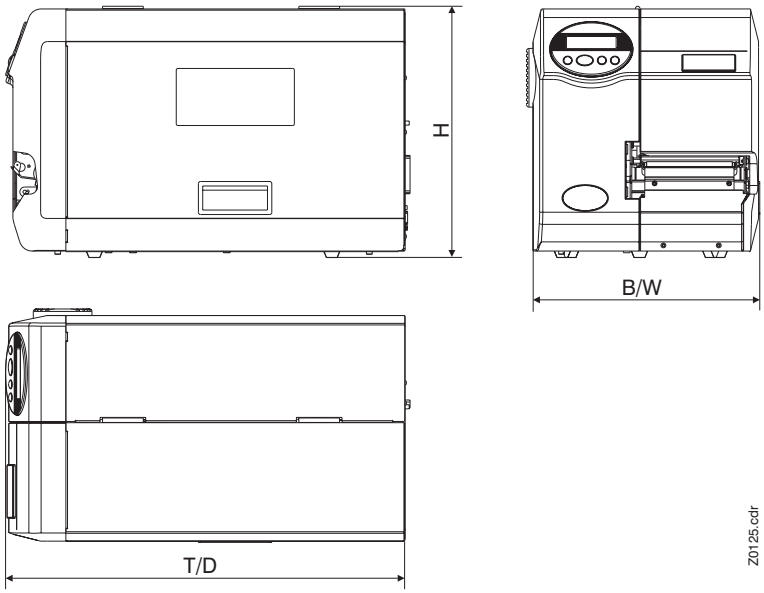

Fig. 1: Dimensions of the 64-xx and Chess x series standard printers. Refer to the following table for the values.

Printer	Cutter	W(idth) / mm	H(eight) / mm	D(epth) / mm	Weight in kg
64-04 / Chess 4		280	305	490	18,5
	✓	280	305	540	20,0
64-05 / Chess 5		320	305	490	20,0
	✓	320	305	540	21,5
64-06 / Chess 6		350	305	490	21,5
	✓	350	305	540	23,0
64-08 / Chess 8		450	305	490	26,0
	✓	450	305	540	27,5
TT4		280	600	490	35,0
	✓	280	600	540	36,5

Tab. 1 Dimensions and weights of the 64-xx / Chess x series printers. All width measures refer to the housing without the approx. 5 mm wide motor cover.

➠ The dispenser versions of the printers have equal dimensions as the standard types, respectively.

❍ Dimensioned drawings of the 64-xx with and without dispenser, cutter or rewinder are contained in DXF format (Autocad) on the Documentation-CD in folder *Massblaetter*\.

Performance data

Print technology Thermal direct printing, thermal transfer printing

Print head "Near Edge Type" print head, high-definition, fast, with integrated temperature control

Resolution 12 dots/mm (300 dpi)

Print speed

64-04 / Chess 4.....50 to 406 mm/s (4 to 16 ”/s)
64-05 / Chess 5.....50 to 406 mm/s (4 to 16 ”/s)
64-06 / Chess 6.....50 to 359 mm/s (4 to 14 ”/s)
64-08 / Chess 8.....50 to 229 mm/s (4 to 9 ”/s)

TT4.....50 to 300 mm/s (4 to 12 ”/s)
Unit interval 25,4 mm/s (1 “/s), respectively

Printer	Ribbon auto-econ.	SYSTEM PARAMETERS / Transport mode =		
		Dispenser motor	Dual motors	Printer motor
64-04/05 Dispenser Chess 4/5 Dispenser		12 "/s	12 "/s	16 "/s
	✓	8 "/s	12 "/s	16 "/s
64-06 Dispenser Chess 6 Dispenser		12 "/s	12 "/s	14 "/s
	✓	8 "/s	12 "/s	14 "/s
64-08 Dispenser Chess 8 Dispenser		10 "/s	10 "/s	9 "/s
	✓	8 "/s	10 "/s	9 "/s

Tab. 2 The maximum print speed of the dispenser printers depends on the setting of the parameter "SYSTEM PARMETERS/ Transport mode". The values are recommendations, up to which proper functioning of the printer is guaranteed.

Print width (actual)

64-04 / Chess 4.....106.6 mm
64-05 / Chess 5.....127.9 mm
64-06 / Chess 6.....159.9 mm
64-08 / Chess 8.....213.2 mm

TT4.....98.0 mm

64-04 dispenser / Chess 4 dispenser .....93.6 mm
64-05 dispenser / Chess 5 dispenser .....127.9 mm
64-06 dispenser / Chess 6 dispenser .....160.0 mm
64-08 dispenser / Chess 8 dispenser .....213.2 mm

Output mode

1:1 and 100 % printable, either with or without cut.
Non-printable area:
1 mm from the front label edge (1st edge in feed direction) and
1 mm from the left band border (right border in feed direction).

Gap detection

Self-initialising light transmission sensor, optional reflex sensor (at the bottom side of the material).
Correction of gap displacement in feed direction is possible by modifying the gap offset (parameter *PRINT PARAMETERS > Punch offset*),

	Light transmission sensor	Reflex sensor
Setting range	2-17 mm	13-26 mm
Punch length (in feed direction)	0.8-14 mm	4 mm (recommended)
Punch width (across the web)	min. 4 mm	12 mm (recommended)

Tab. 3 Punch dimensions and setting ranges.

Emulation

Easy Plug, Line Printer, Hex Dump

Character sets

17 fonts including OCR-A and OCR-B, 2 scalable fonts, truetype fonts supported

Character modification

Scaling in X/Y direction up to factor 16,
Rotation 0, 90, 180, 270 degrees

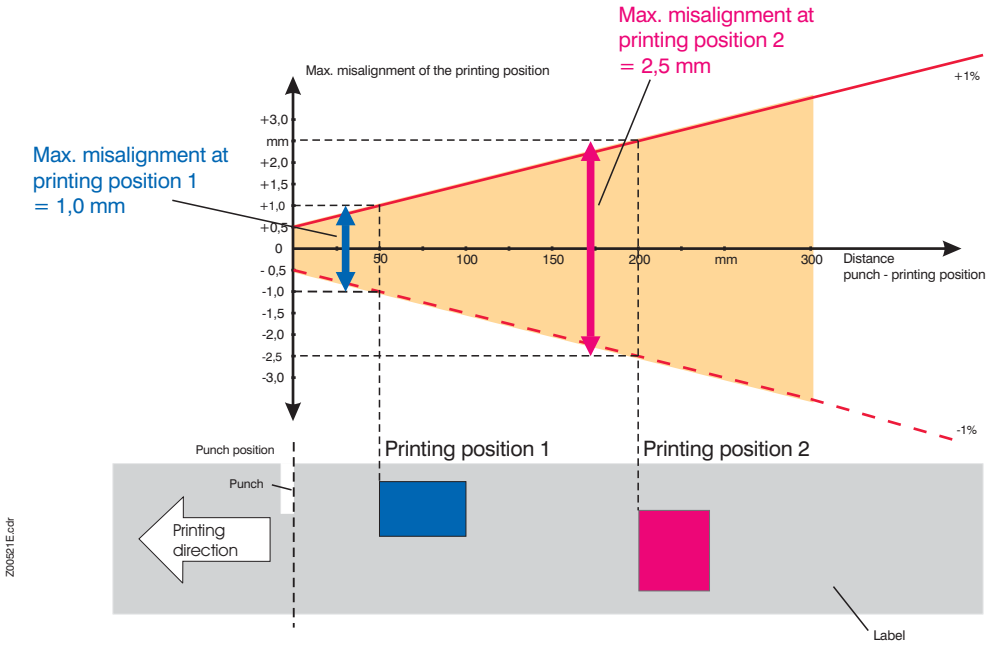

Fig. 2: Impression accuracy depends on the printing position.

Bar codes EAN 8 and EAN 13 with Add-On 2 and 5, UPC-A, UPC-E, Code 39, Code 39 Ratio 3:1 and Ratio 2,5:1, Code ITF, Codabar, Code 128, Code 2/5, Code 2/5 1, Code 2/5 5, Code 2/5 Interleaved Ratio 1:3, Code 2/5 Matrix Ratio 1:2,5; Code 2/5 Matrix Ratio 1:3; Code MSI, Code EAN 128; Postcode (Guide and Identity Code), UPS Code 128
All bar codes scalable in 30 widths and the height

2dim. bar codes Data Matrix Code (coded according to ECC200), Maxi Code, PDF 417, Codablock F

Specifications especially for TT4

Dimensions, Leporello compartments TT4

Compartment	Stack height		Stack length
	Standard	Maximum	
Top	80 mm	120 mm	280 mm
Middle	75 mm	100 mm	380 mm
Bottom	70 mm	100 mm	450 mm
Without comp.		245 mm	450 mm

Tab. 4 Adjustment range of the compartments and the maximum stack length for each compartment of the TT4 magazine.

Scanner TT4 Scanner for barcodes pre-printed on reverse side
Scanning speed: 500 scans/s
Resolution: 0.15 mm
Readable barcodes: 22 different types

Automatic ribbon economy

In regular print mode, ribbon is fed simultaneously with the label material. The automatic ribbon economy (= „ribbon saving“) stops the feeding of the ribbon if there are label areas of a certain size without imprinting. As a result, ribbon is saved (see Fig. 3:).

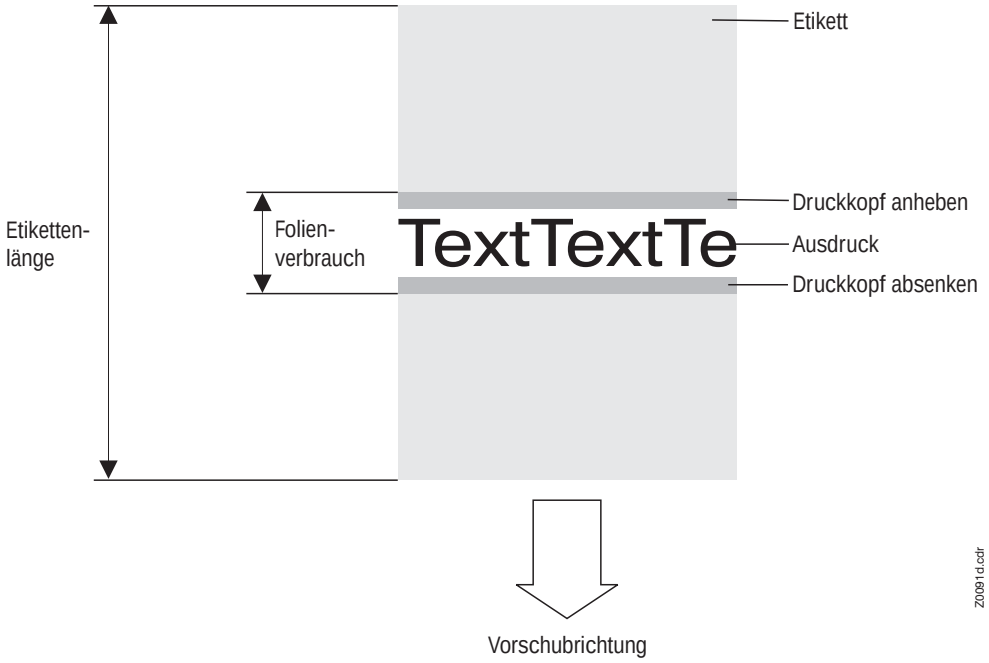

Fig. 3: Ribbon (Foil) consumption when printing labels with a small imprinting area and activated automatic ribbon economy. Ribbon consumption is slightly higher than the length of the imprinted area.

The effect of ribbon saving depends on the print speed. The reason for this is the up and down movement of the printhead as well as the acceleration and slowing-down of the ribbon. Generally said: With a high print speed, less ribbon is saved as with a low print speed (see Tab. 5).

Cutting or dispensing applications can additionally deteriorate the effect of ribbon saving.

Activating ribbon saving

Activate the automatic ribbon economy by selecting parameter „SYSTEM PARAMETERS/ Ribbon autoecon.“.

Set the minimum distance between two print areas from which on ribbon saving should be activated with parameter „SYSTEM PARAMETERS/ Ribbon economy limit“.

❍ For detailed information refer to topic section „Info-printouts and Parameters“.

Only „Real 1:1“

The ribbon saving can only applied in Real 1:1 mode. All printjobs must therefore be defined using the #IMR Easy Plug command.

❍ For detailed information refer to the Easy Plug Manual, topic section „Description of Commands“.

Set the label length exactly; differences between real and defined label lengthe may disturb the automatic ribbon economy function!

The print speed must equal the feed speed when using ribbon saving. Otherwise, the ribbon saving function may not work properly.

Print speed in mm/s (Inch/s)	Minimum length of unprinted area in mm	Consumed ribbon per saving action in mm
51 (2)	3.7	1.2
76 (3)	4.6	1.9
102 (4)	5.9	3.1
127 (5)	7.4	4.4
152 (6)	8.9	5.9
178 (7)	11.1	7.6
203 (8)	14.1	9.5
229 (9)	17.6	11.3
254 (10)	21.3	13.6
279 (11)	25.3	15.9
205 (12)	30.0	18.5
330 (13)	34.5	21.2
356 (14)	39.9	24.2
381 (15)	45.6	27.3
406 (16)	51.3	30.5

Tab. 5 The amount (length) of consumed ribbon per saving action (lifting and lowering of the printhead) increases with the print speed.

Label material specifications

Material types

64-xx:
Use of Leporello material instead of roll material possible (material change necessary).

TT4:
Use of roll material and three different Leporello materials without material change.

Material width

64-04 / Chess 4.....25.4 to 113 mm
64-05 / Chess 5.....25.4 to 154 mm
64-06 / Chess 6.....30.2 to 185 mm
64-08 / Chess 8.....100 to 254 mm

TT4.....25.4 to 99 mm

64-04 / Chess 4 dispenser..... 25,4 bis 99 mm
64-05 / Chess 5 dispenser..... 25,4 bis 140 mm
64-06 / Chess 6 dispenser..... 30,2 bis 172 mm
64-08 / Chess 8 dispenser..... 100 bis 241 mm

Material roll

64-xx:
Roll with max. outer Ø210 mm,
inner Ø1.5" (38 mm), 3" (76 mm), 4" (102 mm)

TT4:
In addition to the roll, 3 Leporello compartments in the magazine.

Material length

64-xx / Chess x.....5 to 1000 mm

64-xx / Chess x dispenser..... 10 bis 1000 mm

Material type

64-xx / Chess x:
Self-adhesive, card and synthetic materials up to 160 g/m^2 (64-08/ Chess 8) or 240 g/m^2 (all other printers of this series), suitable for printing in thermal direct process and thermal transfer process.

TT4:
Card material up to 240 g/m^2, suitable for printing in thermal direct process and thermal transfer process.

Ribbon specifications

Roll weight

64-04 / Chess 4.....max. 4250 g
64-05 / Chess 5.....max. 4250 g
64-06 / Chess 6.....max. 7200 g
64-08 / Chess 8.....max. 5000 g

TT4.....max. 4250 g

Ribbon roll

Max. outer Ø 90 mm, inner 1" (25.4 mm)

Ribbon width

64-04 / Chess 4.....30 to 110 mm
64-05 / Chess 5.....30 to 132 mm
64-06 / Chess 6.....30 to 164 mm
64-08 / Chess 8.....40 to 217 mm

TT4.....30 to 97 mm

64-04 / Chess 4 dispenser..... 30 bis 97.6 mm
64-05 / Chess 5 dispenser..... 30 bis 140 mm

64-06 / Chess 6 dispenser ..... 30 bis 172 mm
64-08 / Chess 8 dispenser ..... 40 bis 241 mm

Operation features

Operation 4-key control panel with 32-figure, illuminated LCD display

Settings Definition of parameters using menu or Easy Plug commands

Test printouts Printouts for parameter settings, adding logo and font, line and bar code library

Test functions Print tests with cut, test routines for memory and sensors, interface test

Error reports Display of error reports on the display,
continuation of print jobs without label loss

Connections, device data

Printer	Mains voltage	Mains frequency	Power consumption	Max. input current
64-04/05/06	115-240 V	50-60 Hz	250 W	3.2 A
64-08	100-240 V	50-60 Hz	450 W	3.2 A

Tab. 6 Connection data for 64-xx printers

Ambient conditions
Operating temperature: .....+5 to +35 °C
Storage temperature: ..... -20 to +70 °C
Humidity: .....45 to 75 %, non-condensing

Interfaces Standard: serial (RS232) and parallel (Centronics);
RS485 or RS422 can be selected by parameter setting instead of RS232;
bi-directional mode for all interfaces possible

Network Interface Printers of the 64-xx series can be operated using the external Ethernet Printserver AS 3600 produced by Sercomm (from firmware version 6018 on).

- Supported network platforms: Novell Netware, Windows 95/98/NT Peer-to-Peer, Windows NT (TCP/IP), Unix, Apple Talk
- Network specification: Data rate: 10 Mbit/s; Type: 10Base-T; Connector: RJ45
- Order no.: A2106

Plug-in cards Slot for Compact Flash Card with 32 MB

Main memory The standard internal main memory (RAM) of the 64-xx printers is 8 MB and can be increased by a 64 MB memory extension module to a maximum of 72 MB. The 64-08 has a 32 MB extension added as a standard (standard RAM of 40 MB).

The maximum label length with 8MB RAM is approx. 1 m, depending on print width, memory assignment and firmware version.

Options

Cutter

Optional high-performance, low-noise cutter with double-cut function from 1 to 5 mm

❍ Refer to manual "Cutter 2000".

Rewinder

Optional rewinder; is mounted to the printer and rewinds the printed label materials with the printed side facing inwards or outwards.

❍ Refer to manual "Rewinder 2000".

USI Interface

Universal Signal Interface (USI). The USI can be applied to control an applicator or a scanner.

❍ Refer to the Service Manual, topic section "Interfaces", paragraph "Universal Signal Interface".

Online verifier

The online verifier (OLV) checks printed bar code immediately after printing it. If the bar code has not been printed or has not been printed in a readable way, the OLV stopps the printer.

Test certificates

TÜV GS

TÜV GS test certificate: Tested safety (according to EN 60950:97)

CE

The devices conform to CE-requirements and are marked with the CE label. The manufacturer declares that the device conforms with the relevant European guidelines.

EMC

The EMC test was made according to the following norms:

EN 55022:98 Class A
EN 55024:98
EN 61000-3-2:95
EN 61000-3-3:95
EN 61000-6-2:99

➠ The norm EN 55022 prescribes the following warning note to be included in the operation manual for devices of class A:

Warning! This is class A equipment. This equipment may cause radio disturbances if it is used in a living area; in those cases can be demanded of the manufacturer to carry out appropriate measures.

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